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FILE 'HOME' ENTERED AT 10:16:53 ON 25 SEP 2007

=> index bioscience
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INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE,
       AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS,
       CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB,
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69 FILES IN THE FILE LIST IN STNINDEX

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=> antibody and purification and conductivity and isoelectric with point
          1   FILE BIOSIS
          3   FILE BIOTECHABS
          3   FILE BIOTECHDS
  13 FILES SEARCHED...
          4   FILE CAPLUS
  23 FILES SEARCHED...
  33 FILES SEARCHED...
          1   FILE LIFESCI
  47 FILES SEARCHED...
        459   FILE USPATFULL
          6   FILE USPATOLD
  62 FILES SEARCHED...
         68   FILE USPAT2

   8 FILES HAVE ONE OR MORE ANSWERS,    69 FILES SEARCHED IN STNINDEX

L1    QUE ANTIBODY AND PURIFICATION AND CONDUCTIVITY AND ISOELECTRIC WITH POINT

=> d rank
F1          459   USPATFULL
F2           68   USPAT2
F3            6   USPATOLD
F4            4   CAPLUS
F5            3   BIOTECHABS
F6            3   BIOTECHDS
F7            1   BIOSIS
F8            1   LIFESCI


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FILE 'BIOSIS' ENTERED AT 10:20:43 ON 25 SEP 2007
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FILE 'LIFESCI' ENTERED AT 10:20:43 ON 25 SEP 2007

=> antibody and purification and conductivity and isoelectric with point
L2 9 ANTIBODY AND PURIFICATION AND CONDUCTIVITY AND ISOELECTRIC WITH POINT

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ENTER L# LIST OR (END):l2
PROCESSING COMPLETED FOR L2
L3 5 DUP REMOVE L2 (4 DUPLICATES REMOVED)

=> d ti 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1
TI Development of purification method of physiol. active proteins (antibodies and cytokines) by using acidic solution from contaminated DNAs and viruses

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
TI Method for polypeptide purification employing ethacridine lactate precipitation

L3 ANSWER 3 OF 5 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
TI Novel Escherichia coli host cell producing recombinant antibody , genetically modified in order to change physical property of proteins of wild-type Escherichia coli, that co-purify with recombinant antibody;
recombinant antibody production via plasmid expression in host cell

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2
TI Purification of antibody and antibody -fragment from E. coli homogenate using 6,9-diamino-2-ethoxyacridine lactate as precipitation agent

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
TI Protein purification by ion exchange chromatography

=> d ab bib 1-5

L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 1
AB A purifn. method for physiol. active proteins, particularly antibodies (Ig Gs, monoclonal antibody) and cytokines by precipitating contaminants such as DNA and viruses in aqueous solution was developed.
The method uses solution (HCl, citric acid or acetic acid solution) of lower pHs than the isoelec. points of the purifn. target proteins and higher than pH 2.0. The solution used for the process is set-up to be 0 .apprx. 100mM in molarity, 0 .apprx. 0.2 in ion strength and 0 .apprx. 300 mS/m in cond. In purifn. of antibodies, protein A or protein G affinity chromatog. matrixes are used with acid elution solution and Tris buffer system to lower the pH. Purifications of anti-human IL-6 receptor antibody, anti-human parathormone related peptide antibody, anti-humanized HM1. 24 antigen antibody and human G-CSF by the claimed method have been demonstrated. The final comtamination of DNA and virus can be reduced as low as 22.5 pg DNA/mL and 1.03 log10 virus/mL (the TCID50 method) after purifn.

AN 2004:252530 CAPLUS
DN 140:249743
TI Development of purification method of physiol. active proteins (antibodies and cytokines) by using acidic solution from contaminated DNAs and viruses
IN Takeda, Kozo; Ochi, Norimichi; Ishii, Kimie; Matsuhashi, Manabu; Imamura, Akinori
PA Chugai Seiyaku Kabushiki Kaisha, Japan
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

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PI	WO 2004024752	A1	20040325	WO 2003-JP11642	20030911
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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	AU 2003262087	A1	20040430	AU 2003-262087	20030911
	EP 1561756	A1	20050810	EP 2003-795400	20030911
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	CN 1681837	A	20051012	CN 2003-821682	20030911
	US 2006142549	A1	20060629	US 2005-527455	20051024
PRAI	JP 2002-265609	A	20020911		
	WO 2003-JP11642	W	20030911		

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AB A method for purifying a desired heterologous polypeptide from microbial fermentation broth or homogenate in which it is produced and solubilized is described. This method involves adding to the broth or homogenate an effective amount of a solution of 6,9-diamino-2-ethoxyacridine lactate (ethacridine lactate) to precipitate host cell impurities under conditions wherein the majority of polypeptide remains soluble, and separating the desired polypeptide from the broth or homogenate. The broth or homogenate containing the ethacridine lactate and polypeptide is also disclosed.
AN 2004:905917 CAPLUS
DN 141:378910
TI Method for polypeptide purification employing ethacridine lactate precipitation
IN Lester, Philip M.; Persson, Josefine
PA Genentech, Inc., USA
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004092393	A1	20041028	WO 2004-US499	20040108
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NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU	2004230670	A1	20041028	AU 2004-230670	20040108
CA	2511946	A1	20041028	CA 2004-2511946	20040108
US	2005037456	A1	20050217	US 2004-754212	20040108
US	7169908	B2	20070130		
EP	1581644	A1	20051005	EP 2004-700878	20040108
EP	1581644	B1	20070606		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR	2004006470	A	20051206	BR 2004-6470	20040108
CN	1759186	A	20060412	CN 2004-80006396	20040108
JP	2006517415	T	20060727	JP 2006-508590	20040108
ZA	2005004990	A	20060830	ZA 2005-4990	20040108
NZ	540895	A	20070330	NZ 2004-540895	20040108
AT	364092	T	20070615	AT 2004-700878	20040108
IN	2005KN01312	A	20060929	IN 2005-KN1312	20050707
US	2007077625	A1	20070405	US 2006-609529	20061212
PRAI US	2003-439418P	P	20030109		
US	2004-754212	A1	20040108		
WO	2004-US499	W	20040108		

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
AB DERWENT ABSTRACT:

NOVELTY - An Escherichia coli host cell (I) expressing a recombinant antibody, is genetically modified in order to change at least one physical property of one or more proteins of wild-type E. coli, that co-purify with the recombinant antibody, is new.

BIOTECHNOLOGY - Preferred Host cell: In (I), the physical characteristic of the E. coli protein that is altered is the isoelectric point, hydrophobicity or size, preferably isoelectric point. The altered host protein is phosphate binding protein (PhoS/PstS), dipeptide protein (DppA), maltose binding protein (MBP) or thioredoxin 1, preferably PhoS/PstS. The isoelectric point of the host protein is altered by the addition of a poly-aspartic acid tag to the C-terminus. The isoelectric point of the PhoS/PstS has been reduced by substituting one or more lysines at amino acid 110, 265, 266 or 318 with glutamine or aspartic acid and further by the addition of a poly-aspartic acid tag to the C-terminus, preferably by substituting the lysines at residues 265 and 266 with glutamine and by the addition of a poly-aspartic acid tag to the C-terminus or by substituting the lysines at residues 110, 265 and 266 with glutamine and by the addition of a poly-aspartic acid tag to the C-terminus. The recombinant antibody is a Fab or Fab' fragment.

USE - (I) is useful for producing a recombinant antibody, which involves fermenting (I) (claimed).

ADVANTAGE - (I) is naturally acquired organism or mutated organism capable of efficiently producing recombinant antibodies. (I) improves the purification process of antibody during fermentation. The recombinant antibody is produced by (I) at lower cost and within shorter period of time.

EXAMPLE - Strain Escherichia coli DPH3 was transformed with a plasmid expressing the desired recombinant antibody (Fab') and altered phosphate binding protein (PhoS). A standard fermentation was performed. Samples taken throughout the fermentation were assayed by enzyme linked immunosorbent assay (ELISA) after

Tris/ethylenediaminetetraacetic acid (EDTA) extraction. After fermentation, centrifugation was carried out and pellets representing 50 ml of harvest culture were extracted overnight at 30 degrees C in Tris/EDTA then prepared for cation exchange purification. The pH was increased from 4.5-5.0 so that PhoS of strain DPH3 would not bind to the cation exchange column but the Fab' fragment would. The conductivity was 3.0 mS/cm. The samples was applied to a 5 ml SP sepharose column and load, the obtained fractions were analyzed by Coomassie stained sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE). Samples were concentrated by using 10 kDa cut-off columns to enable visualization with Coomassie stained gels. The SDS-PAGE gel showed that under the pH and conductivity conditions the mutant PhoS from DPH3 does not bind to the SP sepharose column, while wild-type PhoS (wt PhoS) from E. coli W3110 strain (wild-type) does bind. The means that in DPH3 the mutant PhoS and Fab' appeared in different fractions, while in W3110 both proteins appeared in same fraction. To confirm that any remaining PhoS would also be removed by anion exchange, the fractions from both DPH3 and W3110 experiments were concentrated, desalted and buffer exchanged to 20 mM Tris chloride and run on anion exchange. The Coomassie stained SDS-PAGE gel showed that for DPH3 PhoS binds to the anion exchange column hence separating it from the Fab'. While, the wt PhoS from W3110 does not bind to the column and flows through and contaminates the Fab' solution. Thus on altering the expression of PhoS protein, enabled efficient purification of recombinant antibody (Fab'). (60 pages)

AN 2004-14777 BIOTECHDS

TI Novel Escherichia coli host cell producing recombinant antibody , genetically modified in order to change physical property of proteins of wild-type Escherichia coli, that co-purify with recombinant antibody;
recombinant antibody production via plasmid expression in host cell

AU HUMPHREYS D P; CHAPMAN A P; ROBINSON M K; SPITALI M

PA CELLTECH R and D LTD

PI WO 2004035792 29 Apr 2004

AI WO 2003-GB4474 15 Oct 2003

PRAI GB 2002-24082 16 Oct 2002; GB 2002-24082 16 Oct 2002

DT Patent

LA English

OS WPI: 2004-389520 [36]

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN DUPLICATE 2

AB To obtain a more efficient purifn. process for antibody fragments from an Escherichia coli homogenate, the precipitant, Ethodin (6,9-diamino-2-ethoxyacridine lactate) was introduced to the homogenate. By adding the precipitant a drastic reduction of host cell protein was obtained. The majority of the proteins were recovered in a precipitate with the cell debris, while the antibody or antibody-fragment was recovered in the clarified supernatant. In addition, DNA was also efficiently precipitated when using Ethodin as a precipitation agent. The improved purity of the clarified extract obtained by using the precipitant allows for the use of smaller chromatog. columns and may reduce the number of chromatog. steps required in the recovery process. The effect of Ethodin concentration, pH, temperature, and cond. were investigated. The investigation was performed on two different antibody-fragments, e.g., F(ab')2 mols. and a full-length antibody produced in E. coli. The two F(ab')2 proteins were F(ab')2A and F(ab')2B, which have a similar mol. mass (100 kDa) but different isoelec. points (pls), i.e., 8.9 and 7.5, resp. The full-length antibody, Ab (the full IgG form of F(ab')2B) has a pl of 7.8 and mol. mass of 150 kDa. The investigation showed that the highest purifn. factors were

obtained at neutral pH, low cond., and Ethodin concns. of 0.6%.
AN 2004:636797 CAPLUS
DN 141:378878
TI Purification of antibody and antibody -fragment from E. coli homogenate using 6,9-diamino-2-ethoxyacridine lactate as precipitation agent
AU Persson, Josefine; Lester, Philip
CS AstraZeneca, Soedertaelje, 151 85, Swed.
SO Biotechnology and Bioengineering (2004), 87(3), 424-434
CODEN: BIBIAU; ISSN: 0006-3592
PB John Wiley & Sons, Inc.
DT Journal
LA English
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
AB A method for purifying a polypeptide by ion exchange chromatog. is described which involves changing the cond. and/or pH of buffers in order to resolve a polypeptide of interest from one or more contaminants.
AN 1999:723051 CAPLUS
DN 131:308597
TI Protein purification by ion exchange chromatography
IN Basey, Carol D.; Blank, Greg S.
PA Genentech, Inc., USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9957134	A1	19991111	WO 1999-US9637	19990503
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CA 2478235	A1	19991111	CA 1999-2478235	19990503
AU 9938777	A	19991123	AU 1999-38777	19990503
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EP 1075488	A1	20010214	EP 1999-921610	19990503
EP 1075488	B1	20030502		
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BR 9910332	A	20010925	BR 1999-10332	19990503
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US 6489447	B1	20021203	US 1999-304465	19990503
EP 1308455	A2	20030507	EP 2002-29008	19990503
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     AT 321066            T     20060415    AT 2002-29008           19990503
     CN 1810292           A     20060802    CN 2006-10009258        19990503
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     ES 2261589           T3    20061116    ES 2002-29008           19990503
     US 6339142           B1    20020115    US 2000-679397          20001003
     US 6417335           B1    20020709    US 2000-680148          20001003
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     AU 2003200708        B2    20070104
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     US 7074404           B2    20060711
     IN 2005KN01638       A     20070126    IN 2005-KN1638          20050816
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     CA 1999-2329829      A3    19990503
     CN 1999-805836       A3    19990503
     EP 1999-921610       A3    19990503
     US 1999-304465       A3    19990503
     WO 1999-US9637       W     19990503
     IN 2000-KN391        A3    20001011
     US 2002-253366       A1    20020924
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FULL ESTIMATED COST                                    31.80      35.79

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FULL ESTIMATED COST                                     0.42      36.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                     0.00      -3.12
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          1   FILE ANABSTR
          6   FILE BIOSIS
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  11 FILES SEARCHED...
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         25   FILE CAPLUS
  30 FILES SEARCHED...
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         21   FILE USPATOLD
         97   FILE USPAT2
  67 FILES SEARCHED...

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L4   QUE PURIFICATION AND CONDUCTIVITY AND ISOELECTRIC WITH POINT

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=> purification and conductivity and isoelectric with point
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L5          38 PURIFICATION AND CONDUCTIVITY AND ISOELECTRIC WITH POINT

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PROCESSING COMPLETED FOR L5
L6           33 DUP REMOVE L5 (5 DUPLICATES REMOVED)

=>  d ti 1-20

L6   ANSWER 1 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Effect of new photocatalytic coagulant on NF membrane fouling

L6   ANSWER 2 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Cleaning results of new and fouled nanofiltration membrane characterized
     by zeta potential and permeability

L6   ANSWER 3 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Development of a purification process for a Phase I protein: A
     case study

L6   ANSWER 4 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Dielectric constant of electrolyte solutions confined in a charged
     nanofiltration membrane

L6   ANSWER 5 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Catalytic activity of commercial of TiO2 powders for the abatement of the
     bacteria (E. coli) under solar simulated light: Influence of the
     isoelectric point

L6   ANSWER 6 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Electrokinetic characterisation of cleaned non-circular multi-channelled
     membranes

L6   ANSWER 7 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Fouling studies of a polyamide nanofiltration membrane by selected natural
     organic matter: an analytical approach

L6   ANSWER 8 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Method for polypeptide purification employing ethacridine
     lactate precipitation

L6   ANSWER 9 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Development of purification method of physiol. active proteins
     (antibodies and cytokines) by using acidic solution from contaminated DNAs
     and viruses

L6   ANSWER 10 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   The use of magnetic bed conditioning and pH control to enhance filtration
     by natural titanomagnetite

L6   ANSWER 11 OF 33  BIOSIS  COPYRIGHT (c) 2007 The Thomson Corporation  on
     STN                                          DUPLICATE 1
TI   Purification of antibody and antibody-fragment from E. coli
     homogenate using 6,9-diamino-2-ethoxyacridine lactate as precipitation
     agent.

L6   ANSWER 12 OF 33  PROMT  COPYRIGHT 2007 Gale Group on STN

TI   Colloidal dispersions: an overview: the cosmetic scientist must consider
     various repellent and attractive forces involved in these systems.

L6   ANSWER 13 OF 33  PROMT  COPYRIGHT 2007 Gale Group on STN

TI   Pittcon 2001 Show in Review.
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L6 ANSWER 14 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Histidine as a dipolar eluent component in cation chromatography: II. Prediction of retention data for alkaline and alkaline-earth ions.

L6 ANSWER 15 OF 33 PROMT COPYRIGHT 2007 Gale Group on STN

TI New Products.

L6 ANSWER 16 OF 33 PROMT COPYRIGHT 2007 Gale Group on STN

TI Surface characterization and adsorption abilities of cellulose fibers.

L6 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Protein purification by ion exchange chromatography

L6 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Separation of double-stranded DNA in conventional and isoelectric buffers: Studies on stability and separation performance.

L6 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Isoelectric split-flow thin (SPLITT) fractionation of proteins

L6 ANSWER 20 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Protein separation by electrophoresis in a nonsieving amphoteric medium.

=> d ab bib 19, 18, 11, 10, 9, 5

L6 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
AB Elec. split-flow thin (SPLITT) fractionation permits the continuous separation of charged species, particularly proteins, at gram and subgram levels. We characterized this system and separated protein mixts. based on the difference between protein isoelec. points (pI). For characterization, we examined seven variables. Buffer stability was determined by measuring pH changes per h and the UV spectrum before and after an elec. potential of 50 V was applied. The elec. field across the channel was determined by measuring the buffer cond. and the current passed through it. The exptl. and theor. (calculated) fractional retrieval of proteins was determined by the relative magnitude of field-induced and outlet flow rates. The protein response at various elec. fields (0, 10, 20, 30 V) and solution pHs (4.85, 5.60, 6.87, and 7.80) was examined, as were the effects of the ionic strength of the buffer, protein recovery, and protein separation with pulsed sample injection. To sep. protein mixts. after the system was characterized, we ran continuous SPLITT fractionation of five protein mixts. for more than 8 h. Characterization results show that (1) buffer stability was good for acetate and phosphate buffers, (2) the elec. field across the channel was about 60% of that predicted by a geometric estimation, (3) exptl. retrieval of four proteins (ferritin, BSA, Hb, and cytochrome c) agreed well with calculated retrieval, (4) protein response at the four elec. fields and four solution pHs corresponded to the difference between protein pI and solution pH, (5) lower buffer ionic strength was better for protein separation, (6) protein sample recovery was reasonable from 78 to 90% (mean 85%) for six proteins, and (7) pulsed sample injection led to successful separation of five protein mixts. In the second part of the study, three protein mixts. were successfully separated using continuous separation over 8 h. The collected fractions showed clean separation as confirmed by flow field-flow fractionation and spectrophotometer anal. The throughput was around 15 mg/h and the min. difference between protein pI that permitted separation was about two units. We conclude that isoelec. SPLITT fractionation

has potential for use in protein purifn.
AN 1997:801622 CAPLUS
DN 128:138244
TI Isoelectric split-flow thin (SPLITT) fractionation of proteins
AU Fuh, C. Bor; Giddings, J. C.
CS DEPARTMENT OF CHEMISTRY, UNIVERSITY OF UTAH, SALT LAKE CITY, UT, 84112, USA
SO Separation Science and Technology (1997), 32(18), 2945-2967
CODEN: SSTEDS; ISSN: 0149-6395
PB Marcel Dekker, Inc.
DT Journal
LA English
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
AB In the capillary electrophoresis of double-stranded DNA in isoelectric buffers, worsening of resolution was observed in electropherograms as a function of time passed from the preparation of the separation solution, which consisted of 0.7% hydroxypropylcellulose, HPC, Mr 106, diluted in 150 mM histidine buffer. The DNA standards used were: kilobase pair-ladder, Marker V and Marker VI. In order to understand what happens in the histidine-HPC solution with ageing, the absorbance spectrum (200-500 nm), the conductivity and the pH of the solutions as a function of time were monitored. Fresh His gave a distinct peak at 206 nm. For all the solutions a significant diminution in the maximum absorbance value at 206 nm was observed as a function of ageing, with the concomitant appearance of a peak at 278 nm as the solutions became older. Also the conductivity increases dramatically with the ageing of the solutions and seemed to reach a plateau after ca. 40 days. In concomitance with the conductivity increments with time, the pH of the His solution (isoelectric point, pI=7.6) grew slowly up to pH 7.9; these combined data indicated that a new species contributing to the conductivity and altering the pH was formed from the His molecule, suggesting that His degraded in time. When the dipeptide His-Gly was used instead, a similar ageing phenomenon was observed, but with much reduced kinetics. Mass spectrometry, coupled to RP-HPLC, detected, in aged His solutions, in addition to intact His, two main degradation products: a 110.1 u species and a 93.2 u compound. The mass of the former coincides with the protonated species derived from the formation of a Schiff base on the alpha-amino group of His and subsequent decarboxylation without transformation of the final Schiff base into a chetonic group (a histamine-like molecule terminating with an imino, rather than with an amino group).
AN 1999:536813 BIOSIS
DN PREV199900536813
TI Separation of double-stranded DNA in conventional and isoelectric buffers: Studies on stability and separation performance.
AU Magnusdottir, Soffia; Gelfi, Cecilia; Hamdan, Mahmoud; Righetti, Pier Giorgio [Reprint author]
CS Department of Agricultural and Industrial Biotechnologies, University of Verona, Strada Le Grazie, Ca Vignal, 37134, Verona, Italy
SO Journal of Chromatography A, (Oct. 22, 1999) Vol. 859, No. 1, pp. 87-98. print.
CODEN: JOCRAM. ISSN: 0021-9673.
DT Article
LA English
ED Entered STN: 10 Dec 1999
Last Updated on STN: 10 Dec 1999

L6 ANSWER 11 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 1
AB To obtain a more efficient purification process for antibody

fragments from an Escherichia coli homogenate, the precipitant, Ethodin (6,9-diamino-2-ethoxyacridine lactate) was introduced to the homogenate. By adding the precipitant a drastic reduction of host cell protein was obtained. The majority of the proteins were recovered in a precipitate with the cell debris, while the antibody or antibody-fragment was recovered in the clarified supernatant. In addition, DNA was also efficiently precipitated when using Ethodin as a precipitation agent. The improved purity of the clarified extract obtained by using the precipitant allows for the use of smaller chromatography columns and may reduce the number of chromatographic steps required in the recovery process. The effect of Ethodin concentration, pH, temperature, and conductivity were investigated. The investigation was performed on two different anti body-fragments, e.g., F(ab')2 molecules and a full-length antibody produced in E. coli. The two F(ab')2 proteins were F(ab')2A and F(ab')2B, which have a similar molecular mass (100 kDa) but different isoelectric points (pIs), i.e., 8.9 and 7.5, respectively. The full-length antibody, Ab (the full IgG form of F(ab')2B) has a pI of 7.8 and molecular mass of 150 kDa. The investigation showed that the highest purification factors were obtained at neutral pH, low conductivity, and Ethodin concentrations of 0.6%. Copyright 2004 Wiley Periodicals, Inc.

AN 2004:460963 BIOSIS
DN PREV200400461541
TI Purification of antibody and antibody-fragment from E. coli homogenate using 6,9-diamino-2-ethoxyacridine lactate as precipitation agent.
AU Persson, Josefine; Lester, Philip [Reprint Author]
CS Genentech Inc, 1 DNA Way, San Francisco, CA, 94080, USA
lesterp@gene.com
SO Biotechnology and Bioengineering, (August 5 2004) Vol. 87, No. 3, pp. 424-434. print.
CODEN: BIBIAU. ISSN: 0006-3592.
DT Article
LA English
ED Entered STN: 1 Dec 2004
Last Updated on STN: 1 Dec 2004

L6 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
AB The fine particle size and magnetic properties of natural titanomagnetite (TM) iron sand offer options for novel granular water filtration systems. The isoelec. points (IEPs) of a variety of natural and synthetic TMs were from 3.60±0.06 to 4.01±0.06. TM beds (125-150 μm particle size) expanded by ≤28% were successfully conditioned with vertical fields of .apprx.0.018 T and produced an ≤3-fold increase in hydraulic cond. Filtration studies showed that the filtration efficiency decreased with bed expansion but that this reduction was more than compensated for by reducing the pH to below the IEP of TM. Backwash performance was improved by magnetic conditioning which allowed higher interstitial flow velocities at a given bed expansion.
AN 2004:592685 CAPLUS
DN 141:212245
TI The use of magnetic bed conditioning and pH control to enhance filtration by natural titanomagnetite
AU Yang, Zailu; Langdon, Alan G.
CS Department of Materials and Process Engineering, University of Waikato, Hamilton, 3105, N. Z.
SO Water Research (2004), 38(14-15), 3304-3312
CODEN: WATRAG; ISSN: 0043-1354
PB Elsevier B.V.
DT Journal
LA English
RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN

AB A purifn. method for physiol. active proteins, particularly antibodies (Ig Gs, monoclonal antibody) and cytokines by precipitating contaminants such as DNA and viruses in aqueous solution was developed. The method uses solution (HCl, citric acid or acetic acid solution) of lower pHs than the isoelec. points of the purifn. target proteins and higher than pH 2.0. The solution used for the process is set-up to be 0 .apprx. 100mM in molarity, 0 .apprx. 0.2 in ion strength and 0 .apprx. 300 mS/m in cond. In purifn. of antibodies, protein A or protein G affinity chromatog. matrixes are used with acid elution solution and Tris buffer system to lower the pH. Purifications of anti-human IL-6 receptor antibody, anti-human parathormone related peptide antibody, anti-humanized HM1. 24 antigen antibody and human G-CSF by the claimed method have been demonstrated. The final comtamination of DNA and virus can be reduced as low as 22.5 pg DNA/mL and 1.03 log10 virus/mL (the TCID50 method) after purifn.

AN 2004:252530 CAPLUS

DN 140:249743

TI Development of purification method of physiol. active proteins (antibodies and cytokines) by using acidic solution from contaminated DNAs and viruses

IN Takeda, Kozo; Ochi, Norimichi; Ishii, Kimie; Matsuhashi, Manabu; Imamura, Akinori

PA Chugai Seiyaku Kabushiki Kaisha, Japan

SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004024752	A1	20040325	WO 2003-JP11642	20030911
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2497364	A1	20040325	CA 2003-2497364	20030911
	AU 2003262087	A1	20040430	AU 2003-262087	20030911
	EP 1561756	A1	20050810	EP 2003-795400	20030911
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	CN 1681837	A	20051012	CN 2003-821682	20030911
	US 2006142549	A1	20060629	US 2005-527455	20051024
PRAI	JP 2002-265609	A	20020911		
	WO 2003-JP11642	W	20030911		

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN

AB In total, 13 different com. TiO2 powders with sp. surface areas of 9-335 m2/g and with isoelec. points (IEP) of 3-7.5 were examined for their catalytic activity in Escherichia coli inactivation. TiO2 zeta potential, attenuation size, and IEP were measured using the electro-acoustic method. The effect of TiO2 suspension initial pH was followed during bacterial inactivation. TiO2 Degussa P-25, consisting of an anatase-rutile powder, inactivated E. coli with high kinetics which did not vary with suspension initial pH. This was not the case for the other TiO2 samples studied. The IEP could be correlated with catalytic activity

of com. samples for most TiO2 powder studied. The lower the TiO2 IEP, the lower the bacterial inactivation activity. Electron microscopy showed TiO2 Degussa P-25 clusters were only in partial contact with E. coli K-12 (1 μm diameter). Reasons for this behavior are discussed in terms of TiO2 interaction with E. coli.

AN 2006:169016 CAPLUS
DN 144:418895
TI Catalytic activity of commercial of TiO2 powders for the abatement of the bacteria (E. coli) under solar simulated light: Influence of the isoelectric point
AU Gumy, D.; Morais, C.; Bowen, P.; Pulgarin, C.; Giraldo, S.; Hajdu, R.; Kiwi, J.
CS Laboratory for Environmental Biotechnology (ENAC), Swiss Federal Institute of Technology (EPFL), Lausanne, 1015, Switz.
SO Applied Catalysis, B: Environmental (2006), 63(1-2), 76-84
CODEN: ACBEE3; ISSN: 0926-3373
PB Elsevier B.V.
DT Journal
LA English
RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ti 21-33

L6 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Active agents and mechanism of coagulation of turbid waters using Moringa oleifera

L6 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Isoelectric focusing process and a means for carrying out said process

L6 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Method of purifying proteins by delta isoelectric point chromatography

L6 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Method for separation of amino acids from their mixtures

L6 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Tumor necrosis factor, compositions containing it, DNA encoding it and assay method using this DNA

L6 ANSWER 26 OF 33 ANABSTR COPYRIGHT 2007 RSC on STN DUPLICATE 2
TI Polyacrylamide gel electrophoresis: recovery of non-stained and stained proteins from gel slices.

L6 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI A carrier ampholyte for isoelectric focusing

L6 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Violet-colored acid phosphatase of sweet potato. I. Purification and some physical properties

L6 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Crystallization and reconstitution of yeast aconitase

L6 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Electrical conductivity and the stability of colloids

L6 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Surface electrochemical study of fiber proteins. II. Relation between the surface electric conductivity and isoelectric point

L6 ANSWER 32 OF 33 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI The purification of pepsin, its properties and physical characters.

L6 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI The purification of pepsin, its properties and physiological characters

=> d ab bib 31, 23, 22,

L6 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
AB Surface elec. cond. is defined as the relative value of κs - κ of equal amts. of samples, where κs is the sp. cond. of the surface of the total capillary system and κl is the cond. of the solution alone. Measurements of surface elec. cond. of 4 different samples of silk dialyzed differently (used in previous report) with solns. of different pH value, showed that there is a min. of surface cond. near the isoelec. point . There is another min. near pure water. With the purification of silk the surface cond. decreases, but the min. always lies at the isoelec. point. From the change of surface cond. with the lapse of time, it was recognized that in concentrated solution ionic adsorption takes place, while below a certain concentration of electrolyte (near pure water) desorption of ions, due to impurity, takes place.
AN 1948:28667 CAPLUS
DN 42:28667
OREF 42:6120h-i
TI Surface electrochemical study of fiber proteins. II. Relation between the surface electric conductivity and isoelectric point
AU Kanamaru, Kisou; Hata, Toshio
SO Kogyo Kagaku Zasshi (1944), 47, 544-9
CODEN: KGKZA7; ISSN: 0368-5462
DT Journal
LA Unavailable

L6 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
AB A method for separation and purifn. of proteins by ion-exchange chromatog. (delta isoelec. point chromatog.) comprises determining the pI of the protein and the impurity (by computer simulation or electrophoresis), and then adjusting the pH of the crude protein to the pI value at which the protein and impurity are oppositely charged. Thus, a crude solution of granulocyte-macrophage colony stimulating factor was adjusted to pH 6.0 and diluted with H2O to a cond. of 5.5 mS/cm. It was then chromatographed on Q-Sepharose with an elution gradient of 0.03-0.32 M NaCl in 20 mM Bis-Tris buffer (pH 6.0). Combined fractions (based on SDS-PAGE) were adjusted to pH 5 and 15 mS/cm with HOAc and chromatographed twice on S-Sepharose with an elution gradient of 0.13-0.5 M NaCl in 20 mM HOAc (pH 5.0). Combined fractions (based on SDS-PAGE) were precipitated with (NH4)2SO4, dissolved in Na3PO4 18, citric acid 2 mM, pH 7.2 buffer and chromatographed on Sephacryl S-200HR. Protein-containing fractions were pooled and frozen.
AN 1990:95047 CAPLUS
DN 112:95047
TI Method of purifying proteins by delta isoelectric point chromatography
IN Naveh, David; Tang, John Chu Tay
PA Schering Corp., USA
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW

DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 313343	A1	19890426	EP 1988-309824	19881019
	EP 313343	B1	19950419		
	EP 313343	B2	20030723		
	R: ES, GR				
	WO 8903840	A1	19890505	WO 1988-US3589	19881019
	W: AU, DK, FI, HU, JP, KR, NO, US				
	RW: AT, BE, BJ, CF, CG, CH, CM, DE, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
	AU 8826247	A	19890523	AU 1988-26247	19881019
	AU 626008	B2	19920723		
	HU 52783	A2	19900828	HU 1988-6264	19881019
	HU 204537	B	19920128		
	EP 391934	A1	19901017	EP 1988-909648	19881019
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 03500649	T	19910214	JP 1988-508950	19881019
	JP 07088395	B	19950927		
	AT 121418	T	19950515	AT 1988-309824	19881019
	ES 2070855	T3	19950616	ES 1988-309824	19881019
	ZA 8807862	A	19890628	ZA 1988-7862	19881020
	CN 1032661	A	19890503	CN 1988-107266	19881021
	CN 1031943	B	19960605		
	IL 88118	A	19930610	IL 1988-88118	19881021
	NO 9001769	A	19900420	NO 1990-1769	19900420
	NO 303451	B1	19980713		
	DK 9000996	A	19900423	DK 1990-996	19900423
	FI 103974	B	19991029	FI 1990-2017	19900423
	FI 103974	B1	19991029		
	US 5451662	A	19950919	US 1993-105994	19930812
PRAI	US 1987-111886	A	19871023		
	WO 1988-US3589	A	19881019		
	US 1990-490607	B1	19900420		

L6 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
AB Described is an isoelec. focusing electrophoretic process for the separation and purifn. of an amphoteric or neutral chemical compound from ≥1 elec. charged chemical compds.(s), e.g. a protein from contaminating proteins and salts. The mixture to be separated is present within hydraulic flow in a chamber. Two cylinders on either side of the chamber contain immobilized pH-gradients or are replaced by amphoteric isoelec. pH-membranes. Each of the pH-gradients and pH-membranes has cond . and both buffering and titrant capacity in its pH-interval. The extremities of the gradients or pH-membranes forming the ceiling and the floor of chamber have isoelec. points equal to or just higher and just lower than the isoelec. point of the protein of interest which is kept at its isoelec. point in the hydraulic flow and does not enter the pH-gradients and pH-membranes. Contrary thereto, the contaminating proteins and salts are driven by an elec. field into the pH-gradients or via said pH-gradients or pH-membranes into 2 electrolyte reservoirs. The described process has the advantage that the desired compound need not be detected and extracted from any matrix, e.g. from the pH-gradients, and that the recovery and purity of the desired compound is higher. An apparatus and various modifications thereof are also described. Human adult Hb A was purified from a mixture containing HbC using a lower immobilized pH gradient (IPG) of pH 3.5-7.2 and an upper IPG of pH 7.4-10.0 (preparation of the IPGs is described).
AN 1991:58502 CAPLUS
DN 114:58502

TI Isoelectric focusing process and a means for carrying out said process
IN Faupel, Daniel M.; Righetti, Pier G.
PA Ciba-Geigy Corp., USA
SO U.S., 20 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4971670	A	19901120	US 1988-179619	19880408
	EP 287513	A2	19881019	EP 1988-810226	19880407
	EP 287513	A3	19901010		
	EP 287513	B1	19921202		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AT 83077	T	19921215	AT 1988-810226	19880407
	ES 2037273	T3	19930616	ES 1988-810226	19880407
	DK 8801913	A	19881012	DK 1988-1913	19880408
	DK 174962	B1	20040329		
	FI 8801652	A	19881012	FI 1988-1652	19880408
	FI 97893	B	19961129		
	FI 97893	C	19970310		
	JP 63263457	A	19881031	JP 1988-85487	19880408
	JP 07081987	B	19950906		
	CA 1335805	C	19950606	CA 1988-563616	19880408
	US 5082548	A	19920121	US 1990-577421	19900904
PRAI	GB 1987-8746	A	19870411		
	GB 1987-28289	A	19871203		
	EP 1988-810226	A	19880407		
	US 1988-179619	A1	19880408		

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	49.76	98.57

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-5.46	-8.58

FILE 'STNGUIDE' ENTERED AT 10:49:20 ON 25 SEP 2007

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 24, 2007 (20070

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	1569	conductivity and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/21 13:43
S2	756	conductivity and isoelectric with point and protein and purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/20 15:26
S3	125	conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/21 13:43
S4	37	conductivity with isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/21 13:43
S5	10	conductivity with isoelectric with point and protein with purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/21 13:44
S6	0	conductivity with isoelectric with point same protein with purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/21 13:45
S7	7	conductivity same isoelectric with point same protein with purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:27
S8	0	low same conductivity same isoelectric with point same protein with purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:27
S9	0	low same conductivity same isoelectric with point same protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:27
S10	46	low same conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:27
S11	38	low same conductivity same isoelectric with point and protein	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:27

EAST Search History

S12	0	low same conductivity same isoelectric with point and protein same purfication	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:28
S13	15	low same conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:30
S14	25	ionic with strength and conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:30
S15	7	ionic with strength same conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:31
S16	7	ionic with strength same conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:32
S17	0	mS/m same conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:32
S18	2	mS/m and conductivity same isoelectric with point and protein same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S19	2	mS/m and conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S20	629	mS/m and conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S21	320	mS/m same conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S22	294	mS/m with conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S23	0	mS/m with conductivity and protein with purifcation	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33

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S24	6	mS/m with conductivity and protein with purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 10:33
S25	114580	antibody and purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:48
S26	46998	antibody same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:48
S27	1510	antibody same purification and conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:48
S28	582	antibody same purification and conductivity and ionic with strength	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:48
S29	99	antibody same purification and conductivity and ionic with strength and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:49
S30	5	antibody same purification and conductivity and ionic with strength and isoelectric with point and ms/m	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:50
S31	99	antibody same purification and conductivity and ionic with strength and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:50
S32	30	antibody same purification and conductivity same ionic with strength and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:50
S33	1	antibody same purification and conductivity same ionic with strength same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:50
S34	15	antibody same purification and conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:50
S35	1	antibody same purification and conductivity same isoelectric with point and ms/m	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 11:51

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S36	15	antibody same purification and conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 16:34
S37	2	"6190608".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 16:36
S38	2	"6096872".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/24 16:37
S39	1	WO-8903840-$.did.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:13
S40	47028	antibody same purification	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:13
S41	1511	antibody same purification and conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:13
S42	32	antibody same purification same conductivity	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:13
S43	6	antibody same purification same conductivity and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:18
S44	232	antibody same purification and conductivity and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:18
S45	172	antibody with purification and conductivity and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:18
S46	8	antibody with purification and conductivity same isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:21
S47	172	antibody with purification and conductivity and isoelectric with point	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:21

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S48	132	antibody with purification and conductivity and isoelectric with point and affinity with chromatography	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:21
S49	0	antibody with purification and conductivity and isoelectric with point and affinity with chromatography and dna with contaminents	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 12:21
S50	7	antibody with purification and conductivity and isoelectric with point and affinity with chromatography and dna with contaminants	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 13:44
S51	7	antibody with purification and conductivity and isoelectric with point and protein with a and dna with contaminants	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/09/25 13:44